IN THE CLAIMS:

1. (presently amended) A method for communicating data between an external computing system and an internal computing system over a packet-based network, wherein data is transmitted and received in the form of a plurality of packets, the method comprising the steps of:

receiving a ~~communication~~ packet from the external computing system over the network, the packet having at least a first portion and an end portion, and transmitting the packet to the internal computing system;

in parallel with the step of receiving and transmitting the packet, determining characteristics of the packet from the first portion;

in parallel with the step of receiving and transmitting the packet, performing a plurality of checks on the packet, wherein at least certain of the plurality of checks are performing in parallel with other of the plurality of checks;

in parallel with the step of receiving and transmitting the packet, determining if the packet should be a valid packet or an invalid packet based on the plurality of checks; and

after receiving the end portion of the packet, selectively altering the end portion of the packet based on whether the packet has been determined to be a valid packet or an invalid packet, wherein the packet is selectively altered to be invalid if it was determined that the packet should be an invalid packet.

2. (originally presented) The method of claim 1, wherein the packet is analyzed in real time to determine if the packet should be valid or invalid while the packet is being concurrently transmitted to the internal computing system.

3. (originally presented) The method of claim 1, wherein the packet is analyzed to determine if the packet is valid without the packet having been completely received and buffered.

4. (originally presented) The method of claim 1, wherein the packet is determined to be an invalid packet if it is determined that the packet contains a virus, is unauthorized or presents a risk of harm to the internal computing system.

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5. (originally presented) The method of claim 1, wherein the plurality of checks are at least in part selectively performed based on a state of a physical switch.

6. (originally presented) The method of claim 5, wherein the physical switch comprises one or more user-controlled switches, wherein the plurality of checks are selectively performed based on a user-defined state of the one or more user-controlled switches.

7. (originally presented) The method of claim 6, wherein the one or more user-controlled switches comprise at least one user-controlled switch that controls a configuration or reconfiguration of a circuit that performs the plurality of checks.

8. (originally presented) The method of claim 7, wherein the configuration or reconfiguration of the circuit that performs the plurality of checks is performed without requiring user entry of configuration commands via software running on the internal computing system.

9. (originally presented) The method of claim 7, wherein the circuit that performs the plurality of checks is configured or reconfigured based on commands from the internal computing system and based on a state of the at least one user-controlled switch.

10. (originally presented) The method of claim 5, wherein at least a subset of the plurality of checks are selectively enabled or disabled based on the user-defined state of the user-controlled switches.

11. (originally presented) The method of claim 1, wherein the plurality of checks are performed with a programmable logic device, wherein logic within the programmable logic device is selectively programmed to perform the plurality of checks in parallel with the receiving and transmitting of the packet.

12. (originally presented) The method of claim 11, wherein a first physical interface circuit receives the packet from the network, wherein the packet is coupled to the programmable logic device, wherein the packet is coupled from the programmable logic device to a second physical interface circuit for transmission to the internal computing system.

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13. (originally presented) The method of claim 12, wherein the programmable logic device performs the plurality of checks while the packet is being coupled from the first physical interface to the second physical interface.

14. (originally presented) The method of claim 1, wherein the plurality of checks are selectively performed based on a communication state between the external computing system and the internal computing system.

15. (originally presented) The method of claim 14, wherein the communication state comprises one or more network addresses and/or one or more port numbers.

16. (originally presented) The method of claim 16, wherein the network address comprises an IP address for the external computing system and/or the internal computing system.

17. (originally presented) The method of claim 1, further comprising the step of providing visual or audio feedback with one or more visual or audio feedback devices, wherein the one or more visual or audio feedback devices selectively provide visual or audio feedback of the operation or status of a packet filter process.

18. (originally presented) The method of claim 17, wherein the one or more visual or audio feedback devices provide visual or audio feedback that a system performing the packet filter process is powered or operational.

19. (originally presented) The method of claim 18, wherein the one or more visual or audio feedback devices provide visual or audio feedback that the system performing the packet filter process is subjecting a packet to filtering criteria.

20. (originally presented) The method of claim 18, wherein the one or more visual or audio feedback devices provide visual or audio feedback that the system performing the packet filter process has rejected one or more packets.

21. (originally presented) The method of claim 17, wherein the one or more visual or audio feedback devices provide visual or audio feedback that the internal computing system is suspected to be under attack.

22. (originally presented) The method of claim 21, wherein the one or more visual or audio feedback devices provide visual or audio feedback of an estimated severity of the attack.

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23. (originally presented) The method of claim 18, wherein the one or more visual or audio feedback devices provide visual or audio feedback of a state of the system performing the packet filter process until the one or more visual or audio feedback devices are reset by a user.

24. (originally presented) The method of claim 23, wherein the one or more visual or audio feedback devices are reset by the state of a physical switch.

25. (originally presented) The method of claim 18, wherein the one or more visual or audio feedback devices comprise at least one light source, wherein the light source is selectively controlled to provide information indicative of the operation or status of the system performing the packet filter process.

26. (originally presented) The method of claim 25, wherein the light source is controlled to have a first color or a second color depending on the operation or status of the system performing the packet filter process.

27. (originally presented) The method of claim 25, wherein the light source is controlled to selectively blink depending on the operation or status of the system performing the packet filter process.

28. (originally presented) The method of claim 27, wherein the light source is controlled to selectively blink at a rate that is indicative of a severity level of a suspected attack on the internal computing system.

29. (originally presented) The method of claim 25, wherein the at least one light source comprises an LED.

30. (originally presented) The method of claim 17, wherein the one or more visual or audio feedback devices comprise a speaker.

31. (originally presented) A system for filtering packets of data between at least an external network and an internal network, wherein data is transmitted and received in the form of a plurality of packets, comprising:

a first interface circuit for coupling data packets to and from the external network;

a second interface circuit for coupling data packets to and from the internal network;

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a programmable logic device coupled between the first interface circuit and the second interface circuit;

wherein, as a packet is being received and transmitted between the first and second interface circuits, the packet is simultaneously subjected to a plurality of filtering criteria by the programmable logic device, wherein an end portion of the packet is selectively altered by the programmable logic device based on the filtering criteria.

32. (originally presented) The system of claim 31, wherein the filtering criteria determine whether the packet is to be a valid packet or an invalid packet, wherein the packet is selectively altered to be invalid if it was determined that the packet should be an invalid packet.

33. (originally presented) The system of claim 31, wherein the programmable logic circuit includes at least first logic for determining characteristics of the packet being received and transmitted between the first and second interface circuits and at least a filter portion that subjects the packet to the plurality of filtering criteria while the packet is being received and transmitted between the first and second interface circuits.

34. (originally presented) The system of claim 33, wherein the filter portion includes at least a stateful filter portion and a non-stateful filter portion.

35. (originally presented) The system of claim 34, wherein the stateful filter portion subjects the packet to one or more stateful filtering criterion and the non-stateful filter portion subjects the packet to one or more non-stateful filtering criterion.

36. (originally presented) The system of claim 34, wherein the stateful filter portion subjects the packet to one or more stateful filtering criterion while the non-stateful filter portion subjects the packet to one or more non-stateful filtering criterion.

37. (originally presented) The system of claim 34, wherein a result aggregator logic receives one or more signals from the stateful filter portion and the non-stateful filter portion, wherein based on the received signals the result aggregator logic controls whether the packet is selectively altered to be invalid.

38. (originally presented) The system of claim 37, wherein the result aggregator logic receives a completion signal that indicates whether the stateful and/or non-stateful filter portions have subjected the packet to all of the filtering criteria.

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39. (originally presented) The system of claim 38, wherein, if the completion signal is not received by the result aggregator logic by a time when the end portion of the packet has been received, then the packet is selectively altered by the programmable logic device to be invalid.

40. (originally presented) The system of claim 31, wherein the packet is subjected to the plurality of filtering criteria in parallel with the packet being received and transmitted between the first and second interface circuits, wherein a decision is made whether to selectively alter the packet to be invalid by a time when the end portion of the packet has been received.

41. (originally presented) The system of claim 31, wherein the packet is subjected to the plurality of filtering criteria in real time with the packet being received and transmitted between the first and second interface circuits.

42. (originally presented) The system of claim 31, further comprising one or more physical switches, wherein the packet is selectively subjected to the filtering criteria based on the state of the one or more physical switches.

43. (originally presented) The system of claim 42, wherein the state of the one or more physical switches selectively enable or disable a predetermined portion of the filtering criteria.

44. (originally presented) The system of claim 42, wherein the state of the one or more physical switches selectively enable or disable a predetermined portion of the filtering criteria based on whether a computer coupled to the internal network is controlled to operate in a client mode or a sever mode.

45. (originally presented) The system of claim 42, wherein the state of the one or more physical switches selectively controls a configuration or reconfiguration operation of the programmable logic device.

46. (originally presented) The system of claim 42, wherein the state of the one or more physical switches selectively controls a reset operation of the programmable logic device.

47. (originally presented) The system of claim 31, further comprising one or more visual or audio feedback devices, wherein the one or more visual or audio feedback

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devices selectively provide visual or audio feedback of the operation or status of the system.

48. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices provide visual or audio feedback that the system is powered or operational.

49. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices provide visual or audio feedback that the system is subjecting a packet to the filtering criteria.

50. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices provide visual or audio feedback that the system has rejected one or more packets.

51. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices provide visual or audio feedback that a computer coupled to the internal network is suspected to be under attack.

52. (originally presented) The system of claim 51, wherein the one or more visual or audio feedback devices provide visual or audio feedback of an estimated severity of the attack.

53. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices provide visual or audio feedback of a state of the system until the one or more visual or audio feedback devices are reset by a user.

54. (originally presented) The system of claim 53, wherein the one or more visual or audio feedback devices are reset by the state of a physical switch.

55. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices comprise at least one light source, wherein the light source is selectively controlled to provide information indicative of the operation or status of the system.

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56. (originally presented) The system of claim 55, wherein the light source is controlled to have a first color or a second color depending on the operation or status of the system.

57. (originally presented) The system of claim 55, wherein the light source is controlled to selectively blink depending on the operation or status of the system.

58. (originally presented) The system of claim 57, wherein the light source is controlled to selectively blink at a rate that is indicative of a severity level of a suspected attack on a computer coupled to the internal network.

59. (originally presented) The system of claim 55, wherein the at least one light source comprises an LED.

60. (originally presented) The system of claim 47, wherein the one or more visual or audio feedback devices comprise a speaker.

61. (originally presented) The system of claim 36, wherein the stateful filtering criteria are dependent upon physical switch position, packet characteristics, clock time and/or user-specified criteria.

62. (originally presented) The system of claim 61, wherein the user-specified criteria are entered via a physical input device.

63. (originally presented) The system of claim 62, wherein the physical input device comprises one or more switches, an audio input device, or display input device.

64. (originally presented) The system of claim 61, wherein the user specified criteria are entered via a configuration software.

65. (originally presented) The system of claim 64, wherein the user specified criteria are transferred from the configuration software to the system using a network protocol, infrared port or cable attachment.

66. (originally presented) The system of claim 63, wherein the one or more switches comprise a toggle switch, button switch or multi-state switch.

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